PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Hyeonkuk JEONG	12/21/2009
Xiaosong ZHOU	12/21/2009
Joe ABUAN	12/21/2009
Xiaojin SHI	12/22/2009
Hsi-Jung WU	12/21/2009
James Oliver NORMILE	12/21/2009

RECEIVING PARTY DATA

Name:	Apple Inc.
Street Address:	1 Infinite Loop
City:	Cupertino
State/Country:	CALIFORNIA
Postal Code:	95014-2084

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12646065

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 13316/822101

PATENT REEL: 023696 FRAME: 0232 .00 126

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NAME OF SUBMITTER:	Martin E. Miller
Total Attachments: 2 source=13316_822101Assignment#page1.t source=13316_822101Assignment#page2.t	

PATENT REEL: 023696 FRAME: 0233

ASSIGNMENT

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned hereby sell, assign, and transfer to **Apple Inc.**, a corporation of the state of California, having a principal place of business at One Infinite Loop, Cupertino, California, 95014-2084 ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions and discoveries that are disclosed in the United States Patent Application entitled:

Joint Bandwidth Detection Algorithm for Real-time Communication

the specification of which is attached hereto unless the following is entered:

Filed on	as United States Application Number or PCT International Application Number	and was amended on (if applicable)

and in and to said United States Patent Application and all provisional, divisional, continuing, substitute, renewal, reissue, and other patent applications that have been or shall be filed in the United States or any foreign country on any of said inventions and discoveries; and in and to all original and reissued patents that have been or shall be issued in the United States or any foreign country on said inventions and discoveries; and in and to all rights of priority resulting from the filing of said United States Patent Application;

agree that said Assignee may apply for and receive a patent or patents for said inventions and discoveries in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all provisional, divisional, continuing, substitute, renewal, reissue, and other patent applications on any and all said inventions and discoveries; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said inventions and discoveries and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said inventions and discoveries and for vesting title to said inventions and discoveries, and all applications for patents and all patents on said inventions and discoveries, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Inventor: Hyeonkuk Jeong	
Inventor Signature	Date
24 Jones	12/2/3009
Inventor: Xiaosong Zhou	,
Inventor Signature	Date
	12/21/07
Inventor: Joe Abuan	
Inventor Signature	Date
Ir Shean	12/21/2019

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PATENT REEL: 023696 FRAME: 0234

PATENT Docket No. 13316/822101

Inventor: Xiaojin Shi	
Inventor Signature	Date
Inventor Signature	12/22/2009
Inventor: Hsi-Jung Wu	
Inventor Signature	Date
	Date 2019/12/21
Inventor: James Oliver Normile	
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